

According to the large extra dimension model, a deviation from Newton's inverse square law is expected at below sub-millimeter range.

We have developed an experimental setup using a wire cantilever and an online digital image analysis system, aiming to test the Newtonian inverse square law at below millimeter scale.

Because of a mechanical limit of the gap between objects at around 0.1mm, our sensitivity has reached its limit of the original design.

To resolve the problem, we have started to switch to a new design using a laser interferometer sensor.

The current status and preliminary results will be presented.